

**IN THE CLAIMS**

Claim 1. (Currently Amended) A method for selectively reading counter information in a network device, the method comprising the steps of:

selectively setting a first ripeness indicators in an array of ripeness indicators, each of the ripeness indicators in the array including one or more bits and being associated with one or more of the counters a value of a first counter and, when set, indicating that a value of at least one of the associated one or more counters has exceeded a threshold value, each of the counters - the first counter containing information associated with a statistics of traffic being handled by the network device, the first ripeness indicator indicating that a value of the first counter has reached a particular value;

reading the array of ripeness indicators to determine a subset of the counters that have fullness levels above their respective thresholds; and

after reading the array of ripeness indicators, reading only the subset of counters determined from reading the array of ripeness indicators the first counter to determine the value of the first counter only after the first ripeness indicator has been set and in response to the setting of the first ripeness indicator.

Claim 2. (Currently Amended) The method of claim 1, further comprising resetting the first ripeness indicators after reading the associated counters to a default value.

Claim 3-4. (Canceled)

Claim 5. (Currently Amended) The method of claim 1, further comprising dynamically adjusting the thresholds particular value.

Claim 6-7. (Canceled)

Claim 8. (Currently Amended) A network device, comprising:

a forwarding engine configured to process data traffic received by the network device;

a plurality of counters configured to monitor aspects of data traffic received by the network device;

an array of plurality of ripeness indicators, each of the ripeness indicators in the array including one or more bits and being associated with one or more of the counters, each of the ripeness indicators being indicative of a fullness level of the one or more counters with which it the ripeness indicator is associated and indicating that the fullness level of the one or more counters has exceeded its threshold a particular level; and

control logic configured to read the array of ripeness indicators to determine a subset of the counters that have fullness levels above their respective thresholds, the control logic being further configured to harvest information only from counters in the subset of counters determined from reading the array of ripeness indicators one or more counters associated with a ripeness indicator only after that ripeness indicator has been set.

Claim 9. (Canceled)

Claim 10. (Currently Amended) The network device of claim 8, wherein every the ripeness indicators comprise an array of bits, each bit in the array of ripeness indicators represents representing at least one of said counters.

Claim 11. (Canceled)

Claim 12. (Currently Amended) A network device, comprising:

a forwarding engine configured to process data traffic received by the network device;  
a plurality of counters configured to monitor aspects of data traffic received by the network device;

an array of bits implementing a plurality of ripeness indicators, each of the ripeness indicators being associated with one or more of the counters, each of the ripeness indicators being indicative of a fullness level of the one or more counters with which it is associated and indicating that the fullness level of the one or more counters has exceeded a threshold particular level; and

control logic configured to read the array of ripeness indicators to determine a subset of the counters that have fullness levels above their respective thresholds, the control logic being further configured to read, after reading the array of ripeness indicators, only the subset of

counters that were determined to have fullness levels above their respective thresholds harvest information from the one or more counters associated with a ripeness indicator once that ripeness indicator has been set;

wherein the forwarding engine maintains the counters.

Claim 13. (Original) The network device of claim 8, wherein the control logic is part of the forwarding engine.

Claim 14. (Original) The network device of claim 8, further comprising a switch fabric connected to the forwarding engine.

Claim 15. (Currently Amended) The network device of claim 8, further comprising a statistics coprocessor configured to interface with said counters and said control logic to enable meaningful statistics to be generated from values harvested from said counters.

Claim 16. (Cancelled)